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EXAMINER	
SALATA, ANTHONY J	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 17

Application Number: 09/778,481
Filing Date: February 07, 2001
Appellant(s): ZAHARIA ET AL.

David Gaskey
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 7-30-03.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows:

Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1-22 are rejected under 35 U.S.C. 103(a)

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-22 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

4,414,920	Yamagami	3-1979
4,427,940	Hirama et al	1-1984
5,025,893	Saito	6-1991

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The terminology of inspection device "spaced from the sheave" and "when the

portion is spaced away from the sheave" does not appear to be present is the originally filed specification and cannot be seen other than in the newly amended claims 1,5,13.

Page 2, lines 17, merely states that the device is positioned "relative" to the sheave.

Claims 1-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The instant specification pages 6-10, merely gives examples of placement schemes for the inspection device and clearly states on page 6, lines 7-11 and page 10, lines 3-9, that the particular location for the inspection device is subject to interpretation and that "those skilled in the art will be able to take into account the various factors that indicate ideal placement of an inspection device in a particular situation". It cannot be seen how this would comprise a structural limitation or method step.

The specification seems to imply that one of ordinary skill in the art would be able to place the sensor at the most logical position rather than state the particular steps needed to determine the precise location. Only the discussion relating to figures 2A,2B discuss the steps that determine a placement of the sensor in the best available position but this would appear to be knowledgeable to of ordinary skill in the art or material that would be available in an installation manual as no steps or structure appears present in the specification.

Claims 1,2, 4-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagami (4145920) and Hirama et al (4427940) and applicants admitted prior art.

Yamagami teaches in figures 1-6, an elevator rope wear sensor.

A cab 4 and counterweight 5 are connected by rope 3 and moved over sheave 2a.

As illustrated in figure 2, the rope 3 is made of several strands.

A detector 7 determines if the rope has worn and signals by alarm 11.

The detector is placed such that nearly all of the rope is detected which would inherently include "the portion most likely to wear". The detector 7 is placed on drive machine 2 and detects nearly all of the rope 3.

Yamagami does not illustrate the placement of the detector "away from the sheave", see above rejection under 35 USC 112.

Hirama et al teaches a rope wear detector for an elevator which detects the internal wear of a "belt" encasing in a protective coating several wire ropes 2. As illustrated in figure 1, the detector 5 is placed away from sheaves 4A,4B.

Hirama et al states that the use of detecting coil type detector improves the sensitivity of defect detection in a rope wear detector as well as detection of a cavity or crinkle, in addition to the detection of a break.

Applicant states on page 1, lines 12-13, that ropes or belts typically include a plurality of cords which may be coated. Page 4, lines 1-2, specifically state "rope and belt are considered synonymous".

As illustrated in Yamagami, the detector 7 is placed on the drive machine 2 over the sheave 2a. In detecting nearly the entire length of the rope and as a 1:1 roping arrangement, the detection of the "most likely portion" would be inherent.

Thus, to substitute a rope shown in Yamagami for the belt shown in Hirama et al would have been an obvious engineering design to improve the sensitivity of the rope detection as well as he substitution of rope/belt as acknowledged by applicant.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagami and Hirama et al and applicants admitted prior art as applied to claim 1 above, and further in view of Saito (5025893).

Yamagami does not illustrate a sheave at the cab but in a machine room.
Saito illustrates the use of roping ratios other than 1:1 and teaches in the Background of the Invention that as such a sheave may be placed on the cab to obtain a desired rope ratio. As such, the detector would be placed on the cab sheave. Thus, to use known roping arrangements within Yamagami would have been an obvious engineering design choice to one of ordinary skill in the art to provide a desired rope ratio.

(11) Response to Argument

The examiner is persuaded in response to applicants arguments concerning the rejection under 35 USC 112 first paragraph as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

While several of the sensors are shown near the sheave in the drawing figures. Figures 1,3A,3B,4A,4B show the sensor away from the sheave.

In response to applicants argument with respect to the rejection under 35 USC 112 as containing subject matter which was not described in the specification in such a way as to enable

one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The instant specification merely gives examples of conditions that would cause a belt to wear and gives several examples of belt and sheave placement in elevator systems and shows where the detector would be placed. This placement is somehow determined by the experience of the installer for every conceivable type of sheave and belt placement. Applicant does not however, claim these specific examples and it cannot be seen how the placement for these examples or any other is determined as no specific steps appear present within the specification.

The instant specification, for example page 4, lines 10-14, state the inspection device is placed "relative" to the elevator components.

Page 5, lines 3-7, state the strategic placement based on a variety of factors.

Lines 7-10 state the variety of factors which include number and nature of bends, diameter of sheaves etc.

Lines 14,15 specifically state "This invention utilizes one or more of these factors for determining the ideal placement of the inspection device"

The examiner understands that a list of variables would be used in formula for the placement of the sensor within the elevator hoistway. However, no such formula can be found within the instant specification.

Page 6, lines 1-11 clearly state the examiner position that no structure or method steps are present by which the instant invention can be realized.

Lines 3-6, state that "those skilled in the art will be able to determine what factors to account for in a particular situation" and "...will be able to assign appropriate significance or weighing to the various factors"

Lines 7-11 state that "other arrangements are possible where other locations of the inspection device will provide the best results." Further, the invention is not limited to the examples shown.

The specification then provides several examples of elevator arrangements (roping, sheave placement) and the location applicants desire for the sensor placement.

The examiner can see ONLY the specific examples presented in the sensor placement. Applicant states that "types of considerations" (variables) are present in the specification and shows "5" types (examples) . However, applicant does not claim these specific examples and it appears to be left up to the experience of the designer/installer as to the placement of the sensor as NO structure, formula or method steps are present within the instant specification to make such a determination.

In response to the rejection under 35 USC 103(a).

Yamagami et al teaches in figure 1, a sheave 2a with a sensor 7 placed to determine rope 3 wear for an elevator arrangement.

FIG. 1

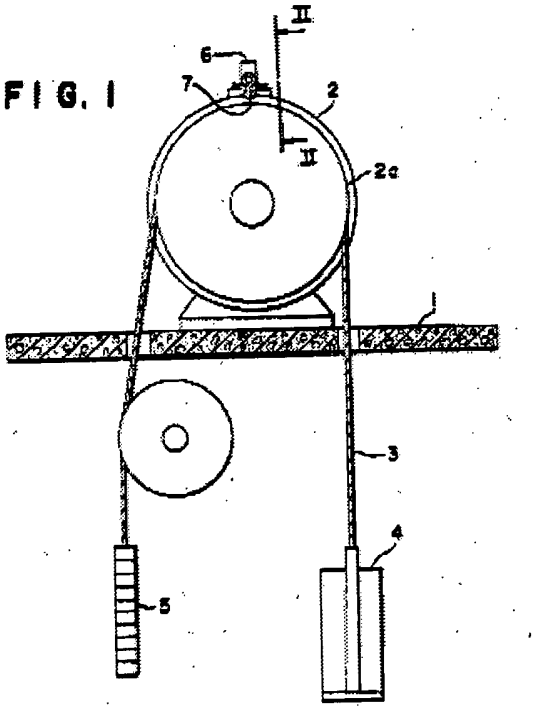
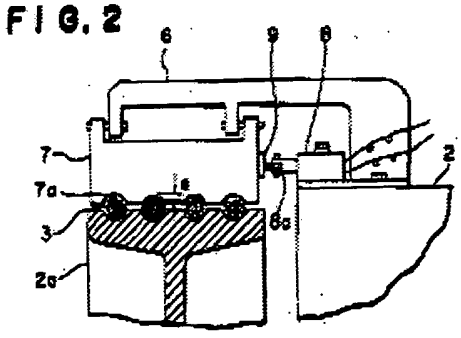


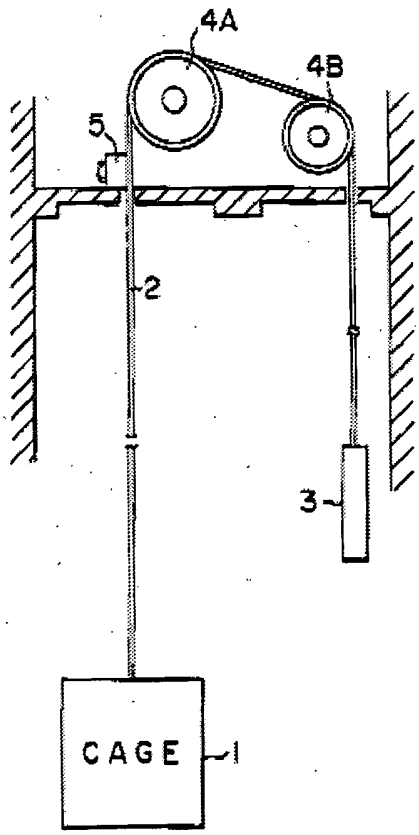
Figure 2 illustrates the sensor not on the sheave but the examiner realizes that this is not the intent of the instant invention.

FIG. 2



Hirama et al illustrates a rope detector 5 for an elevator arrangement including sheaves 4A,4B. This type of detector is stated by Hiurama et al to be more sensitive than previous detectors. As illustrated, the sensor is placed away from the sheave (further than that shown within Yamagami et al).

FIG. 1



Thus, to utilize a more precise senor would have been an obvious engineering design choice to one of ordinary skill in the art.

It is not seen why applicant requires a direct merging of the two references to provide a workable device.

Applicant is incorrect in stating (page 13, lines 7,8) "To not literally combine the references is to avoid the required analysis under 35 USC 103."

Rather, it is the teaching of Hirama et al within an elevator rope wear detection environment, that states a more sensitive sensor is available to one of ordinary skill in the art. It is not seen how the entire purpose of the references is defeated by such a teaching.

Hirama et al teaches that the sensor of Yamagami et al can be replaced with a more sensitive detector (which does not have to be mounted in such close proximity as Yamagami et al sensor 7) in order to determine rope wear more precisely and which can determine cavities etc. in addition to a break in the rope.

It is further not seen why the Yamagami et al reference would need to state that his own device was in need of rearrangement or modification. It is Hirama et al which states that a better sensor is available and that such a sensor would allow itself to be placed further from the sheave.

Further, the placement of Hirama et al and Yamagami et al detect nearly the entire length of the rope. As such, the "portion most likely to wear" would be detected.

Applicant states that nothing in claims 6,7,8,9,11,13 and 22 can be shown or suggested in the cited references.

Clearly roping arrangements, sheave location, bends etc. are shown within the figures of both references. Applicants generic statement of nothing can be shown is not clear based on the drawing figures.

In response to the rejection under 35 USC 103(a) to claim 3.

Saito clearly shows a sheave mounting on the cab as known in the art.

Clearly to determine rope wear, a sensor would be provided. It is not seen where the examiner proposed such a placement on the sheave as stated by applicant.

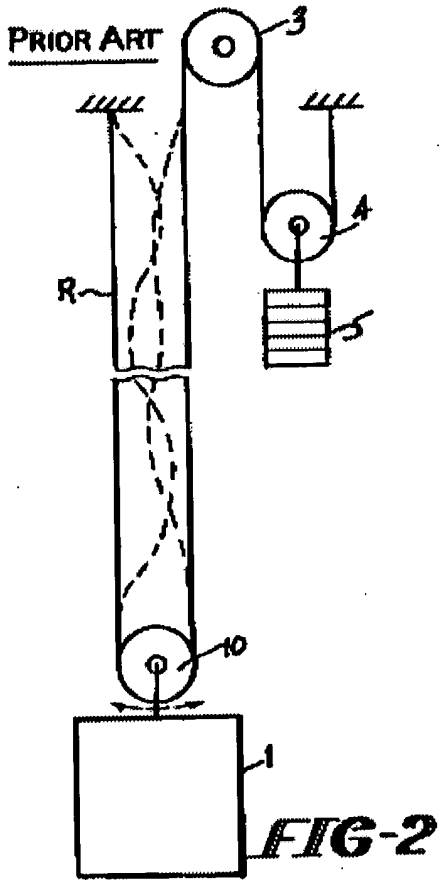


FIG-2

Such a placement allows for desired roping ratios as is known within the art.

Thus, to place a sheave on a cab would be an obvious engineering design choice to one of ordinary skill in the art.

In summary, the instant specification does not provide any structure, formula or method steps by which one of ordinary skill in the art can place a rope wear sensor to detect the most likely point of wear. It appears that several criteria are desired by applicant in the determination but it basically comes down to the experience of a elevator designer or installer to use the criteria in the correct location of the sensor placement.

Further, the combination of the cited art appears proper in suggesting that various sensors can be used in the determination of rope wear and depending upon the type chosen, the sensor can be place on or away from the elevator sheave of which the sheave can be at a location different from the machine room such as on the elevator cab.

As such, the present combination of references appears to show the claimed structure and would appear to determine the most likely portion of rope wear merely by the fact that almost all of the rope/belt is detected.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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